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Editorial

Prism adaptation and unilateral neglect: Beyond an apparent negative result

We are pleased to publish in this issue of the *Annals of Physical and Rehabilitation Medicine* a paper by Rode et al., entitled "Long-term sensorimotor and therapeutical effects of a mild regime of prism adaptation in spatial neglect. A double-blind RCT essay." This paper promises to be an important contribution to the literature on neglect rehabilitation.

The seminal description by the same group, in 1998 [1], of the beneficial effect of prism adaptation (PA) on unilateral neglect, was the starting point of a new research field on this intriguing phenomenon, both from a clinical and theoretical point of view [2]. However, despite a large number of studies, the therapeutic effect of PA remains controversial. This concern is not limited to PA; unfortunately, it also applies to most other techniques that showed promising beneficial effects under experimental conditions but did not translate to clinically significant improvements. Indeed, Bowen et al. [3], in their recent meta-analysis of the Cochrane database, reached the following conclusions: "The effectiveness of cognitive rehabilitation interventions for reducing the disabling effects of neglect and increasing independence remains unproven." However, the authors also suggested a need for future studies with "appropriate high quality methodological design and reporting to examine persisting effects of treatment and to include an attention control comparator."

This need is precisely why studies such as the one reported in this issue by Rode et al. are especially welcome. Indeed, in this well-designed double-blind randomised controlled trial including 20 patients with unilateral neglect, the authors included both standardised and functional measures to assess generalisation to everyday life. They also carefully assessed long-term effects up to 6 months after treatment. Unfortunately, the trial found no significant treatment-related effect, as both groups improved similarly. However, this negative finding is certainly not the end of the story and does not mean that PA should not be used as a treatment option for patients with unilateral neglect. As the authors point out, a more intensive PA regimen (two sessions or more per week instead of one as in the present study) might be more effective. As Rode et al. point out: "The relationship between PA effectiveness and treatment duration/number of sessions remains to be studied through future clinical trials."

In addition, the outcome measures may be questioned. The authors used as a primary outcome measure a global measure of functional independency, the Functional Independence Measure (FIM). However, the FIM is a multi-determined scale, strongly determined by motor abilities. More specific outcome measures, such as the Catherine Bergego Scale [4], which has been successfully used in recent therapeutic trials [5], could be a more sensitive measure to assess generalisation to daily life skills. The combination of PA with other therapeutic tools might be a promising area of research.

Despite the apparent negative effect of PA on function, the paper by Rode et al. proposes an interesting analysis of the sensorimotor results of PA. It represents a major contribution to the neglect rehabilitation literature, and should definitely encourage further research in this area.

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